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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,350	04/22/2005	Eric Domejean	28954-1426	1725

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STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER	
THOMAS, LUCY M	

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/532,350	DOMEJEAN ET AL.	
	Examiner	Art Unit	
	Lucy Thomas	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Recitation of "a variable resistor 38 and a spark arrester 40" in Paragraph 19, lines 2-3 is inconsistent with the labeling of the elements in Figures 1 and 2. Figures 1 and 2 labels variable resistor as 40 and spark arrester as 38. Appropriate correction is required.

The element recited in the specification, "dipole" (for example in Paragraph 7, lines 25, 30) does not meet the conventional definition of a dipole. A dipole is defined as a pair of equal and opposite electric charges or magnetic poles of opposite sign separated by a small distance or a body or system having such charges. Appropriate correction is needed.

Claim Objections

2. Claims 1-2, 4, and 12 are objected to because of the following informalities: Claim 1recites the limitation "dipole" in line 17, 18, 22, and 24, which does not meet the conventional definition of a dipole. The dependent Claims 2, 4, and 12 also recite the same element. Appropriate correction is required.

Claim 4 recites the limitation "fixed fourth electrode" in line 2, which is not supported in the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Menier et al. (US 5,493,264). Regarding Claim 1, Menier discloses a protection device 10 against voltage surges, comprising: a first connecting electrode 38 in electrical connection with a first connecting pad 32, a second connecting electrode (see peak portion of 30) in electrical connection with a second connecting pad 28, a third mobile arc switching electrode 22 electrically connected to the second connecting pad, an arc chute 45 opening out onto the first and second connecting electrodes, means for driving the mobile electrode 18, 34, 44, 43 (Column 2, lines 52-57) with respect to the first connecting electrode from an operating position to a switching position moving away from the first connecting electrode and moving towards the second connecting electrode, so that an electric arc drawn between the first connecting electrode and the mobile electrode switches between the first connecting electrode and the second connecting electrode when the mobile electrode moves from the operating position to the switching position, and an electric dipole 26 connected in such a way that when the mobile electrode is in the operating position, the electric dipole is connected to the arc switching electrode on the one hand and to the first or second connecting pads on the other hand, and that when the mobile electrode is in the switching position and an electric arc is drawn between the first connecting electrode and the second connecting electrode, the electric dipole is disconnected from the circuit, the electric dipole having an ohmic resistance varying non linearly with the voltage applied to the dipole, the

ohmic resistance being high when the voltage is lower than an ignition voltage and decreasing when the voltage increases above the ignition voltage (Abstract, Column 2, lines 41-57).

Regarding Claim 2, Menier discloses the device, wherein the electric dipole is connected in series between the switching electrode and the second connecting pad (see Figures 2-5 and 7). Regarding Claim 3, Menier discloses the device, wherein the mobile electrode in the operating position is in contact with the first connecting electrode (see Figure 3).

Regarding Claim 5, Menier discloses the device, comprising in addition electromagnetic induction projection means 36 has electromagnetic induction projection means) to induce electromagnetic forces on an electric arc formed between the first connecting electrode and the mobile electrode tending to project the arc to the arc chute and/or tending to make the arc switch on the second connecting electrode (Column 2, lines 46-57, Column 3, lines 63-67). Regarding Claim 6, Menier discloses the device, wherein the driving means comprise electromagnetic induction repulsion means (driving means 18, 34, 36, 44, 43 has electromagnetic induction repulsion means) to induce electromagnetic forces on the mobile electrode through which a current is flowing tending to drive the mobile electrode to the switching position (Column 3, lines 35-50). Regarding Claim 7, Menier discloses the device, wherein the electromagnetic induction repulsion means comprise a magnetic driving circuit to channel a magnetic flux generated by an electric current flowing between the first connecting pad and the first connecting electrode to the mobile electrode in the operating position, so that when an

electric current flows from the first connecting pad to the mobile electrode, electromagnetic forces are induced in the mobile electrode, tending to drive the mobile electrode to the switching position (Column 3, lines 50-62).

Regarding Claim 8, Menier discloses the device, wherein the driving means comprise an electro-mechanical relay 18 sensitive to the current flowing in the first connecting electrode or the mobile electrode. Regarding Claim 9, Menier discloses the device, wherein the driving means comprise a mechanism equipped with a mobile means for operation between an operating position and a disconnection position and a kinematic link (see 64, 66 in Figures 3-5) between the means for operation and the mobile electrode to drive the mobile electrode to a disconnected position when the means for operation move from the operating position to the disconnection position.

Regarding Claim 10, Menier discloses the device, wherein the driving means comprises flexible return means 24 for returning the mobile electrode to the operating position (Column 2, lines 41-44). Regarding Claim 11, Menier discloses the device, wherein the driving means comprises an energy storage spring 34, discharging when driving the mobile electrode from the operating position to the switching position.

5. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Menier et al. (US 5,493,264). Regarding Claim 1, Menier discloses a protection device 10 against voltage surges, comprising: a first connecting electrode 20 in electrical connection with a first connecting pad 46, a second connecting electrode 38 in electrical connection with a second connecting pad 32, a third mobile arc switching electrode 22 electrically connected to the second connecting pad, an arc chute 45 opening out onto

the first and second connecting electrodes, means for driving the mobile electrode 18, 34, 36, 44, 43 (Column 2, lines 52-57) with respect to the first connecting electrode from an operating position to a switching position moving away from the first connecting electrode and moving towards the second connecting electrode, so that an electric arc drawn between the first connecting electrode and the mobile electrode switches between the first connecting electrode and the second connecting electrode when the mobile electrode moves from the operating position to the switching position, and an electric dipole 26 connected in such a way that when the mobile electrode is in the operating position, the electric dipole is connected to the arc switching electrode on the one hand and to the first or second connecting pads on the other hand, and that when the mobile electrode is in the switching position and an electric arc is drawn between the first connecting electrode and the second connecting electrode, the electric dipole is disconnected from the circuit, the electric dipole having an ohmic resistance varying non linearly with the voltage applied to the dipole, the ohmic resistance being high when the voltage is lower than an ignition voltage and decreasing when the voltage increases above the ignition voltage (Abstract, Column 2, lines 41-57).

Regarding Claim 4, Menier discloses the device, wherein the electric dipole is connected between the first connecting electrode and a fixed fourth electrode 28 situated at a distance from the first connecting electrode and in such a way that the mobile electrode in the operating position is electrically connected to the fixed fourth electrode (see Figure 2). The electric dipole connected between the first and the fourth electrode is an additional one.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Menier et al. (US 5,493,264) in view of Macanda (US 6,930,871). Regarding Claim 12, Menier does not disclose the electric dipole comprises a variable resistor. Macanda discloses a protection device 1 against voltage surges with a dipole, which comprises a variable resistor (see Figures 3-4, spark gap 2a-c in series with variable resistor 5a-f). It would have been obvious to those skilled in the art at the time of the invention to use a dipole which comprises a variable resistor as taught by Macanda, because variable resistor provides faster response to voltage surges.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT
December 27, 2005

PHUONG T. VU
PRIMARY EXAMINER